

Title (en)  
BACILLUS, HYALURONIC ACID ENZYME, AND USES THEREOF

Title (de)  
BACILLUS, HYALURONSÄUREENZYM UND VERWENDUNGEN DAVON

Title (fr)  
BACILLE, HYALURONIDASE ET LEURS APPLICATIONS

Publication  
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Application  
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Abstract (en)  
[origin: EP2818543A1] The present invention provides a bacillus sp. having a deposit access number of CGMCC NO. 5744 and a hyaluronidase produced by the bacillus and the amino acid sequence of the hyaluronidase is shown in SEQ ID NO: 2. The present invention further relates to a process for preparing oligomeric hyaluronic acid or salts thereof or low-molecular-weight hyaluronic acid or salts thereof by using the bacillus or the hyaluronidase produced thereby. The produced oligomeric hyaluronates or low-molecular-weight hyaluronates have advantages such as good transdermal absorption ability, high purity, no cytotoxicity, potent antioxidant ability. The present invention also provides use of the bacillus having a deposit access number of CGMCC NO. 5744, or the hyaluronidase, oligomeric hyaluronates or salts thereof, low-molecular-weight hyaluronates or salts thereof produced by the bacillus in the fields of osmetics, food products and medicines.

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Cited by  
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